

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Amended) A computer-implemented system to facilitate attributed debugging system for debugging a computer software application, the computing system comprising:
_____ a processor; and
_____ a computer readable storage medium storing the following components:
 a debugger that facilitates debugging of a computer software application;
 a debuggee that includes one or more attributes associated with the computer software application, which attributes are employed by the debugger to facilitate debugging of the software application; and,
 _____ an expression evaluator that evaluates the one or more attributes associated with the computer software application according to an attribute definition, and presents debug information associated with the computer software application in accordance with the attribute definition, wherein the evaluation of at least one of the one or more attributes determines that a value to be shown for a field or property of the software application is the result of an evaluation of an expression contained in the code of the software application, which value is different from the value that would be shown for the field or property when the corresponding attribute is removed, and wherein the attribute definition declaratively indicates how the developer-customizable format in which the debug information is presented-displayed in a developer-customizable format data window.
2. (Amended) The system of claim 1, wherein the expression evaluator evaluates an expression associated with a particular programming language.
3. (Amended) The system of claim 2, wherein the programming language is at least one of C#, J# or Visual Basic.Net.

4. (Amended) The system of claim 2, wherein the computer readable storage medium stores ~~comprising~~ a plurality of expression evaluators, each expression evaluator associated with a particular programming language.
5. (Amended) The system of claim 1, wherein the expression evaluator invokes an overridden implementation of a ToString method to facilitate presentation of debug information.
6. (Amended) The system of claim 5, wherein the expression evaluator employs a result of the overridden ToString method as a value to be displayed for an object, field, property, or combinations thereof.
7. (Amended) The system of claim 1, wherein at least of the one or more attributes employed to ~~determines~~ at least one of how and whether a type or member is displayed.
8. (Amended) The system of claim 7, wherein at least one of the one or more attributes ~~employing~~ an enumeration.
9. (Amended) The system of claim 8, wherein one enumeration value associated with an indication specifies that the type or member should not be displayed to the developer.
10. (Amended) The system of claim 8, wherein one enumeration value associated with an indication specifies that if a type is hierarchical, it should be expanded by default.
11. (Amended) The system of claim 8, wherein one enumeration value associated with an indication specifies that a type should not be expanded by default.
12. (Amended) The system of claim 8, wherein one enumeration value associated with an indication specifies that a target element itself should not be shown, but should instead be automatically expanded to have its member(s) displayed.

13. (Amended) The system of claim 1, wherein at least one of the one or more attributes employed specifies what is displayed for a class and/or field.

14. (Amended) The system of claim 13, wherein an argument to the attribute ~~comprising~~ comprises a string that is displayed in a value column for an instance of the class and/or field.

15. (Amended) The system of claim 14, wherein the argument is associated with one of a field, a property or a method, or combinations thereof.

16. (Previously Presented) The system of claim 1, further comprising an attribute cache directory that stores an attribute associated with the computer software application, the expression evaluator employing the stored attribute to present debug information.

17. (Amended) A computer-implemented method for facilitating debugging a computer software application using facilitating-attributed debugging, the method comprising:

determining whether a process in a computer software application has an attribute attached thereto; and,

if the process has an attribute attached thereto, evaluating the attribute according to utilizing a definition of the attribute to display debug information, if the process has an attribute attached, wherein the evaluation of the definition of the attribute determines that a value to be shown for a field or property of the software application is the result of an evaluation of an expression contained in the code of the software application, which value is different from the value that would be shown for the field or property when the corresponding attribute is removed; and

displaying the debug information is displayed-in a developer-customizable format according to declarative indication included in the attribute, the attribute includes a declarative indication of how to display the debug information.

18. (Original) The method of 17, further comprising at least one of the following:

determining whether a ToString method has been overridden; and,

invoking the overridden ToString method to facilitate debugging, if the ToString method has been overridden.

19. (Amended) A computer readable storage medium having stored thereon computer executable instructions for carrying out the method of claim 17.

20. (Canceled)

21. (Amended) A computer readable storage medium storing computer executable components of an attributed debugging system, the attributed debugging system comprising:

a debugger component that allows the manipulation of view data in the debugger~~facilitates debugging of a computer software application~~; and,

an expression evaluator component that employs an attribute definition to evaluate an attribute associated with the computer software application to present debug information associated with the computer software application to a developer, wherein the employment of the attribute definition determines that a value to be shown for a field or property of the software application is the result of an evaluation of an expression contained in the code of the software application, which value is different from the value that would be shown for the field or property when the corresponding attribute is removed, and wherein the debug information is presented~~displayed~~ in a developer-customizable format ~~and is presented in accordance with the attribute definition and in a developer-customizable data window~~.

22. (Amended) A computer-implemented attributed debugging system for debugging a computer software application, comprising:

a debugger that facilitates debugging of a computer software application;

a debuggee that includes one or more attributes associated with the computer software application, which attributes are employed by the debugger to facilitate debugging of the software application wherein at least one of the attributes is a DebuggerBrowseableAttribute that is employed to determine whether and how a type or member is displayed in a data window, and wherein at least of the attributes is a DebuggerDisplayAttribute that is employed to control what is displayed for a class or field in the data window, and wherein at least one of the attributes is a DebuggerTypeProxyAttribute that is employed to specify the display proxy of a type; and,

an expression evaluator that evaluates the one or more attributes associated with the computer software application according to an attribute definition, and means for storing an attribute associated with a computer software application; and,

means for employing the stored attribute and an attribute definition to presents debug information associated with the computer software application in accordance with the attribute definition, wherein the evaluation of at least one of the one or more attributes determines that a value to be shown for a field or property of the software application is the result of an evaluation of an expression contained in the code of the software application, which value is different from the value that would be shown for the field or property when the corresponding attribute is removed, and to a developer, wherein the attribute definition declaratively indicates how the debug information is presented in a developer-customizable format in which the debug information is displayed in a developer-customizable data window.